

CLAIMS

1. A method for producing lithium ion secondary batteries, comprising the steps of:

(A) preparing an electrode sheet with lead-forming parts,

(B) intermittently forming porous insulating layers comprising an inorganic oxide filler and a binder on a surface of said electrode sheet excluding said lead-forming parts,

(C) connecting a lead to each of said lead-forming parts, and

(D) fabricating batteries by using the electrode sheet to which said leads are connected,

wherein said step B comprises:

the step of applying a slurry comprising the inorganic oxide filler and the binder to the outer surface of a gravure roll, and transferring the slurry applied to the outer surface of said gravure roll on a surface of said electrode sheet that is being transported by a plurality of guide rolls excluding said lead-forming parts; and

the step of moving at least one selected from said gravure roll and said guide rolls to make said electrode sheet away from said gravure roll in said lead-forming part.

2. The method for producing lithium ion secondary batteries in accordance with claim 1, wherein said step A comprises the step of applying a paste comprising an electrode

material mixture to the outer surface of a gravure roll, and transferring the paste applied to the outer surface of said gravure roll on a surface of an electrode core member that is being transported by a plurality of guide rolls.

3. The method for producing lithium secondary batteries in accordance with claim 1, wherein at least a part of the outer surface of said gravure roll is covered with ceramic.

4. The method for producing lithium secondary batteries in accordance with claim 2, wherein at least a part of the outer surface of said gravure roll is covered with ceramic.

5. The method for producing lithium ion secondary batteries in accordance with claim 1, wherein in said step B a part of the slurry applied to the outer surface of said gravure roll is scraped off by a blade without being transferred to the surface of said electrode sheet.

6. The method for producing lithium ion secondary batteries in accordance with claim 2, wherein in said step A a part of the paste applied to the outer surface of said gravure roll is scraped off by a blade without being transferred to the surface of said electrode core member.

7. The method for producing lithium ion secondary batteries in accordance with claim 1, wherein the traveling direction of the outer surface of said gravure roll is opposite to the traveling direction of said electrode sheet.

8. The method for producing lithium ion secondary batteries in accordance with claim 2, wherein the traveling direction of the outer surface of said gravure roll is opposite to the traveling direction of said electrode core member.